COLLABORATIVE STAGE
DATA COLLECTION SYSTEM

CSv2 Vendor Meeting
NAACCR Webinar
January 13, 2010

Presenters:

Suzy Hoyler, CSv2 Project Leader

David Roney, CSv2 IT Team Lead

Jennifer Seiffert, CSv2 Mapping Team

Joseph Rogers, CSv2 Development Lead

Peter Kim, CSv2 Developer

Don Green, CSv2 Tester

Susan Capron, EDITS

Agenda

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Introduction – *David Roney*
- Project Overview – *Suzy Hoyler*
- Timeline for Software Releases – *David Roney*
- CSv2 Production Version and Web Site – *Joe Rogers*
- API and Systems Documentation – *Peter Kim*
- Testing – *Don Green*
- Conversion Specifications – *Jennifer Seiffert*

Agenda, (Cont.)

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- EDITS – *Sue Capron*
- Implementation Guideline – *Suzy Hoyler*
- Questions & Answers – *Panel*

Introduction

Project History

- First vendor webinar conducted March 30, 2009
  - Provided overview of design and plans for CSv2 software systems
  - Updates were provided during in-person meetings at NCRA and NAACCR
- Second vendor webinar conducted November 4, 2009
  - Included the beta-release of the CSv2 software
  - Allowed vendors to integrate CSv2 into their software systems
  - Included a limited number of schemas

Goals For This Webinar

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Release initial production version of CSv2 software and related system information
  - Version 02.00.01
- Orient vendor community to CSv2 web site
- Review related CSv2 documents and products
  - Documentation
  - Conversion specifications
  - EDITS
  - Implementation guideline
- Provide forum for Q&A

Project Overview

Major Change from CSv1

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

	CSV1 (AJCC 6th Ed)	CSv2 (AJCC 7th Ed)	Change
Schemas	94	152	62%
Tables (estimated)	1,900	6135	-
Site-Specific Factors	6	25	-

Mapping Team's Status

- 100% site-specific schemas completed by the Mapping Team
- 100% ready for testing
  - XML discrepancies still being identified

CSv2 "User Documentation"

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

Part 1

- Section 1 – General Rules *(completed)*
  - Extensively revised/expanded
  - Improvements based on suggestions from users and reliability studies
- Section 2 – Site-specific notes *(due late January)*
  - Lab Tests and Tumor Markers
  - Site-Specific Factor notes
    - Published in two parts

CSv2 “User Documentation”

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Electronic manual
  - Bookmark on desktop
  - 508 compatible for people with disabilities
  - Hyperlinks not ready yet
    - Available late Winter/early Spring 2010

Training

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Over 150 individuals trained as lecturers *(completed)*
- Lectures developed on 10 sites plus Part 1 overview *(completed)*
- Dedicated website for sharing information with trainers set up *(completed)*

Training

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Several venues for learning available from standard setters (NCRA, COC, NAACCR, NPCR)
  - Conferences
  - On-line
  - Webinars

CSv2 Inquiry & Response System

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- System has been revised
- Users will submit questions for review by site-specific experts
  - Panels are being formed
- Access system through CSv2 web site

Pre and Post Treatment Stage Group Implementation

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Consensus statements completed for
  - Pre-treatment/clinical staging category
  - Post-treatment staging category
- Next steps
  - Measure/define impact on tables
  - Revise tables if needed
- Implementation January 1, 2011

CSv2 Implementation Plan

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Implement January 1, 2010
  - Use NAACCR 12 Standards
  - Calculate AJCC 7th edition on all cases diagnosed as of January 1, 2010
  - Use only CSv2 once installed
- Implement January 1, 2011
  - Pre- and post-treatment stage processing

COLLABORATIVE STAGE
DATA COLLECTION SYSTEM

Timeline For Software Release

CSv2 Alpha and Beta Releases

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Alpha versions for testing team
  - First release: September 2009
  - Updated throughout test period
- Beta version for vendors
  - First release: November 4, 2009
  - Stable product throughout test period

CSv2 Production Release

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- CSv2 Production Version Released Today
  - Version 02.00.01
  - Fully functional DLL
  - Includes all API calls
  - Includes all schemas
  - Table Attributes
  - Systems documentation
  - Sample programs
- Reminder: Discard all calculations derived from the Beta release

CSv2 Testing Products

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- CSv2 Test Products
  - Test-O-Matic
  - Test data
    - With valid data
    - With invalid data
  - Spreadsheets for:
    - Valid CS field values
    - Invalid CS field values
    - Obsolete codes (4 types)

Future CSv2 Software Releases

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Current version was locked down for testing
  - No DLL problems detected
  - A few CSv2 stage code anomalies found
- New version to be released
  - Before end of January
  - To correct limited mapping issues
- Expect further releases through first quarter 2010 as testing continues

COLLABORATIVE STAGE
DATA COLLECTION SYSTEM

CSv2 Production Version and Web Site

Collaborative Stage Version 2.0 (CSv2) Production Version Application Program Interface (API)

Joseph D. Rogers

Team Lead

Cancer Surveillance Branch (CSB)

Division of Cancer Prevention and Control (DCPC)

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

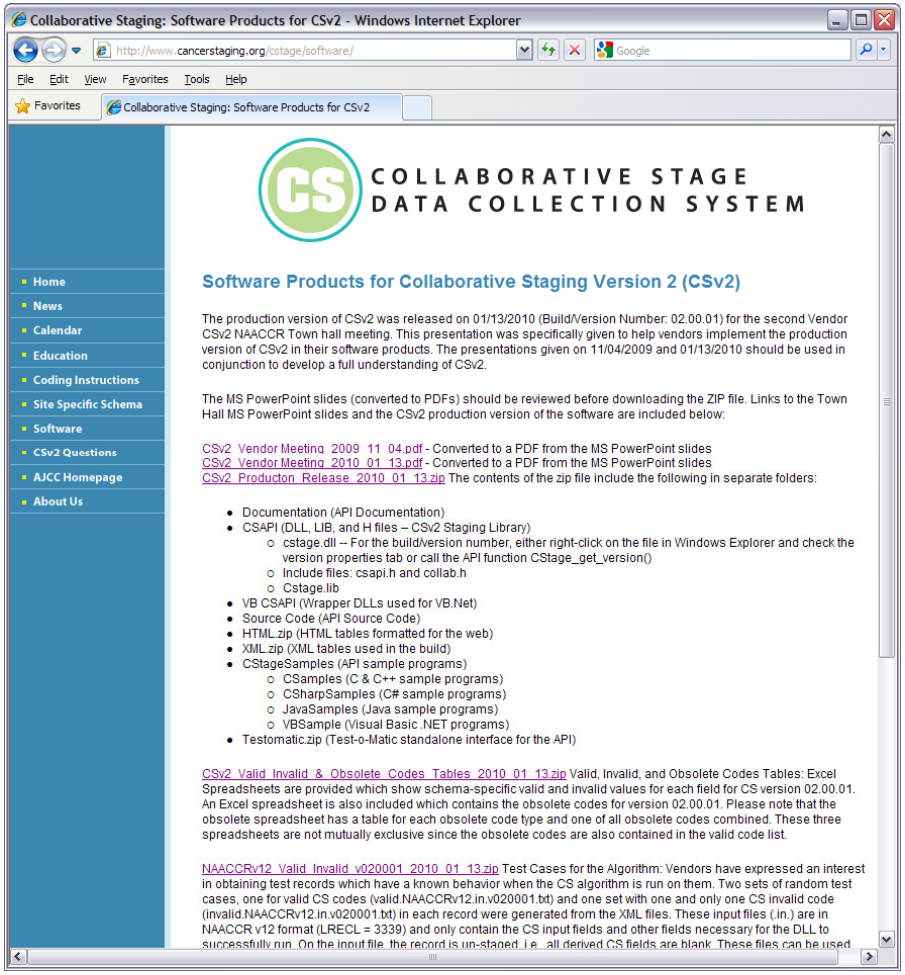
Centers for Disease Control and Prevention (CDC)

Atlanta, Georgia

Outline

- Collaborative Stage Website
- CSv2 Production Version Zip Files
- Contact information

Collaborative Stage (CS) Website



- **Hosted by AJCC:**

  CS Version 1 will be archived for future for future reference:

  - Software: Application Program Interface (API)
  - Software Documentation
  - Sample Program with API included
  - XML and HTML Tables
  - Source Code
  - Validation Codes
  - Test Cases

- Collaborative Stage Version 2 will be hosted by AJCC on this page
  - www.cancerstaging.org/cstage/software/
  - The production version will include a link to a single zip file

CSv2 Production Zip Files

- API Documentation
- DLLs
  - cstage.dll
  - Wrapper dlls used for VB.Net and Java
- Include files: csapi.h and collab.h
- Source Code
- API Sample Programs
  - Test-o-Matic
  - VB.NET, C, Java, and C#
- XML & HTML tables used in the build
- Other Zip Files Include
  - Validation Codes
  - Test Cases

API and Systems Documentation

CS Vendor Webinar
CSv2 Software

Peter Kim

Northrop Grumman Contractor, NCCDPHP

Cancer Surveillance Branch (CSB)

Division of Cancer Prevention and Control (DCPC)

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

Centers for Disease Control and Prevention (CDC)

Atlanta, Georgia

Usage of CSv1 Functions

- Schema selection/staging
- Data transfer
- Validation of codes
- Table properties/data

Overview of CSv2 Changes

- Datacard changes
- Storage codes defined for AJCC 7th ed. derived fields
- Table numbers for new tables
- Flags for staging errors added/updated
- Number of standard tables increased

Overview of CSv2 Changes (cont.)

- Functions that return strings return const char *
- CSv2 functions
  - Removed
  - Changed
  - Added

Datacard Changes

- CS Lymph Nodes lengthened to 3 chars
- New inputs
- New outputs
- Error message buffer size increased

Datacard Changes

- New inputs
  - Lymph-vascular invasion
  - Year of Diagnosis, CS Version Original
  - SSF 7-25
- New outputs
  - Derived AJCC 7 fields
  - Derived AJCC 7 storage fields

Year of Diagnosis, CS Version Original

- Year of Diagnosis: first 4 digits of Date of Diagnosis
- CS Version Original: 6 digit version (2 major, 2 minor, 2 least significant)
- AJCC 6th ed. (coded under CSv2) always calculated
- AJCC 7th ed. is calculated based on values of inputs

Year of Diagnosis, CS Version Original (cont.)

- AJCC 7th ed. calculated when
  - Year of diag. >= 2010 and year of diag. <= current year OR
  - Year of diag. is blank and CS Ver. Original >= 020000
- If year of diag. invalid or year of diag. < 2004 or year of diag. > current year
  - Error, no AJCC 7th ed. staging

New Datacard Outputs

- Derived AJCC-7 T, AJCC-7 N, AJCC-7 M
- Derived AJCC-7 Stage Group
- Derived AJCC-7 T Descript, N Descript, M Descript
- Storage code for each display code (3 chars)

Table Numbers

New table numbers – can be used to iterate through tables

- *enum TableNum { SIZ = 1, … ,SSF1, … , SSF6,* ***SSF7, SSF8, …, SSF24, SSF25, HIST7****, HIST,* ***AJCC7****, AJCC,* ***SEERSUM****… };*
- First 39 tables are fixed

New/Changed Error Flags

- CSTAGEFAIL
- DISCRIMINATORFAIL, VERSIONFAIL
- SCHEMASELECTIONFAIL
- AJCC 7th edition errors
  - T, N, M, Stage group, T descr, N descr, M descr

Error Flags (cont.)

// Calculation error occurred for one or more staging systems

#define CSTAGEFAIL

(TNMorEVALSFAIL | TNM7orEVALS7FAIL | SEER77FAIL | SEER2000FAIL)

Error Flags (cont.)

```
// Invalid schema discriminator
#define DISCRIMINATORFAIL   (1<<18)

// Invalid year of diagnosis/CS Ver Original
#define VERSIONFAIL         (1<<19)
```

Error Flags (cont.)

```
#define SITEorHISTFAIL
    (SITEFAIL | HISTFAIL)

// Schema selection failed
#define SCHEMASELECTIONFAIL (SITEorHISTFAIL
    | DISCRIMINATORFAIL)
```

CSv1 API Functions Removed from CSv2

- CStage_get_table_name()
  - Replaced by CStage_get_table_title(), CStage_get_table_subtitle()
- CStage_get_column_header()
  - Replaced by CStage_get_code_col_header(), CStage_get_descrip_col_header()
- CStage_get_table_role()

Changed API Functions

- CStage_move_naaccr_to_datacard(), CStage_move_datacard_to_naaccr()
  - Modified for NAACCR 12
- CStage_get_display_code()
  - Modified for AJCC 7th ed. storage codes
- CStage_get_schema_number()

Schema Selection

CStage_get_schema_number() in CSv2

- Takes site, histology, and third parameter, “schema discriminator”
- Discriminator used when site and histology are insufficient to select schema
  - These cases are uncommon
- Discriminator value ignored when not needed

Schema Selection (cont.)

- Discriminator also used in stage calculation (internally)
- Valid discriminator codes stored in discriminator table
  - SSF25 reserved for discriminator table

Schema Discriminator Cases

1. Nasopharynx/PharyngealTonsil
   - Site: C111
   - Histology: Various
2. MelanomaIris/MelanomaCiliaryBody
   - Site: C694
   - Histology: 8720-8790

CStage_get_schema_number() examples

- Case 1: invalid site/histology
  - Error code returned (negative value)
- Case 2: valid site/histology, no discriminator needed
  - Legit schema number returned (1 – S, S = CStage_get_number_of_schemas()
- Case 3: valid site/histology, discriminator needed but not supplied

Workflow: Schema Selection for Data Entry

CStage_get_schema_number("C694", "8720", "") = ?

1. CStage_get_schema_number() calculates position of discriminator table
   - Default schema number: 134 (MelanomaIris)
   - Discriminator table number (SSF25): 34

Workflow: Schema Selection (cont.)

2. CStage_get_schema_number() combines schema number and table number into single value and returns it

134, 34

= 134 * pow(2, 16) + 34

= 8781858

Workflow: Schema Selection (cont.)

3. API user decomposes return value into schema number and table number

Int retval = CStage_get_schema_number()…

Int schemanum = retval / 65536 (134)

Int tablenum = retval % 65536 (34)

Workflow: Schema Selection (cont.)

4. API user reads information from discriminator table and builds picklist

```
Int numrows =
    CStage_get_number_of_rows(134, 34)

For (int i = 1; i < numrows; i++)
    code = CStage_get_code_string(134,34,i,1)
```

Discriminator Table

MelanomaIris

CS Site-Specific Factor 25
Schema Discriminator: Melanoma Ciliary Body/Melanoma Iris

- Note: For cases coded to melanoma of primary site code C694 [Ciliary Body], code the site in which the tumor arose. This information will be used to determine which of two CS schemas will be used to assign staging values to the case.

Code	Description	Schema
010	Ciliary Body Crystalline lens Sclera Uveal tract Intraocular Eyeball	MelanomaCiliaryBody
020	Iris	MelanomaIris
100	OBSOLETE DATA RETAINED V0200 C69.4 - originally coded in CSv1	MelanomaCiliaryBody

Workflow: Schema Selection (cont.)

5. UI user selects value from picklist

CStage_get_code_string(134, 34, 3, 1) = “100”

Workflow: Schema Selection (cont.)

6. API user passes discriminator code to CStage_get_schema_number(). Schema selected, continue with data entry

CStage_get_schema_number("C694", "8720", "100") = 135 (MelanomaCiliaryBody)

Workflow: Stage Calculation from Record

Example workflow: calculating stage from a defined NAACCR record

1. API user populates datacard with NAACCR data and calls CStage_calculate()

Workflow: Stage Calculation (cont.)

2. If schema discriminator is required to select schema, NAACCR record must contain a valid discriminator code.

Workflow: Stage Calculation (cont.)

3. If record was originally coded in CSv1 and schema discriminator is required:

- Record must be converted and populated with discriminator code
- Some discriminator tables contain special codes for CSv1 cases
- Conversion specs in progress

CStage_get_schema_number

CStage_get_schema_number()

- Will return an error for schemas that are still under revision (temporary)
- CStage_calculate() will also return an error

New CSv2 Functions

- CStage_validate_inputs()
- CStage_initialize(), CStage_uninitialize()
- Table attribute functions
  - CStage_get_table_usage()
  - CStage_get_table_currency()
  - CStage_get_table_role()

New CSv2 Functions (cont.)

- CStage_get_schema_title()
- CStage_get_schema_subtitle()
- CStage_get_schema_sitesummary()
- CStage_get_number_schema_notes()
- CStage_get_schema_note()
- CStage_get_schema_revision_date()

New CSv2 Functions (cont.)

- CStage_get_table_id()
- CStage_get_table_revision_date()

CStage_validate_inputs()

int CStage_validate_inputs(const int schema_number, datacard *dc, unsigned long *input_flags, unsigned long *ssf_flags);

- Validates a set of inputs in a datacard
- Schema must be identified
- Two flags needed to store results
- Constants for invalid flags defined in collab.h

CStage_initialize(), CStage_uninitialize()

CStage_initialize(), CStage_uninitialize()

- Initialize and uninitialize application data
- Required for non-CS DLL using software before and after use of CS
- Called for CS DLL-using software during DLL load/unload process; should not be called manually

Table Attributes

Distinguish between different types of tables

- Useful for constructing lists
  - Display input tables only
  - Exclude obsolete tables from display
- Divided into usage, currency, role
- Still under construction

Usage

int CStage_get_table_usage(const int schema_number, const int table_number)

- Usage: is table used
  - Active (used in stage calculation)
  - Drone (not used in stage calculation)
  - Undefined (“not applicable”)
  - Discriminator

Currency

int CStage_get_table_currency(const int schema_number, const int table_number)

- Currency: indicates whether table is currently applicable
  - Current
  - Future (placeholder)
  - Obsolete

Role

int CStage_get_table_role(const int schema_number, const int table_number)

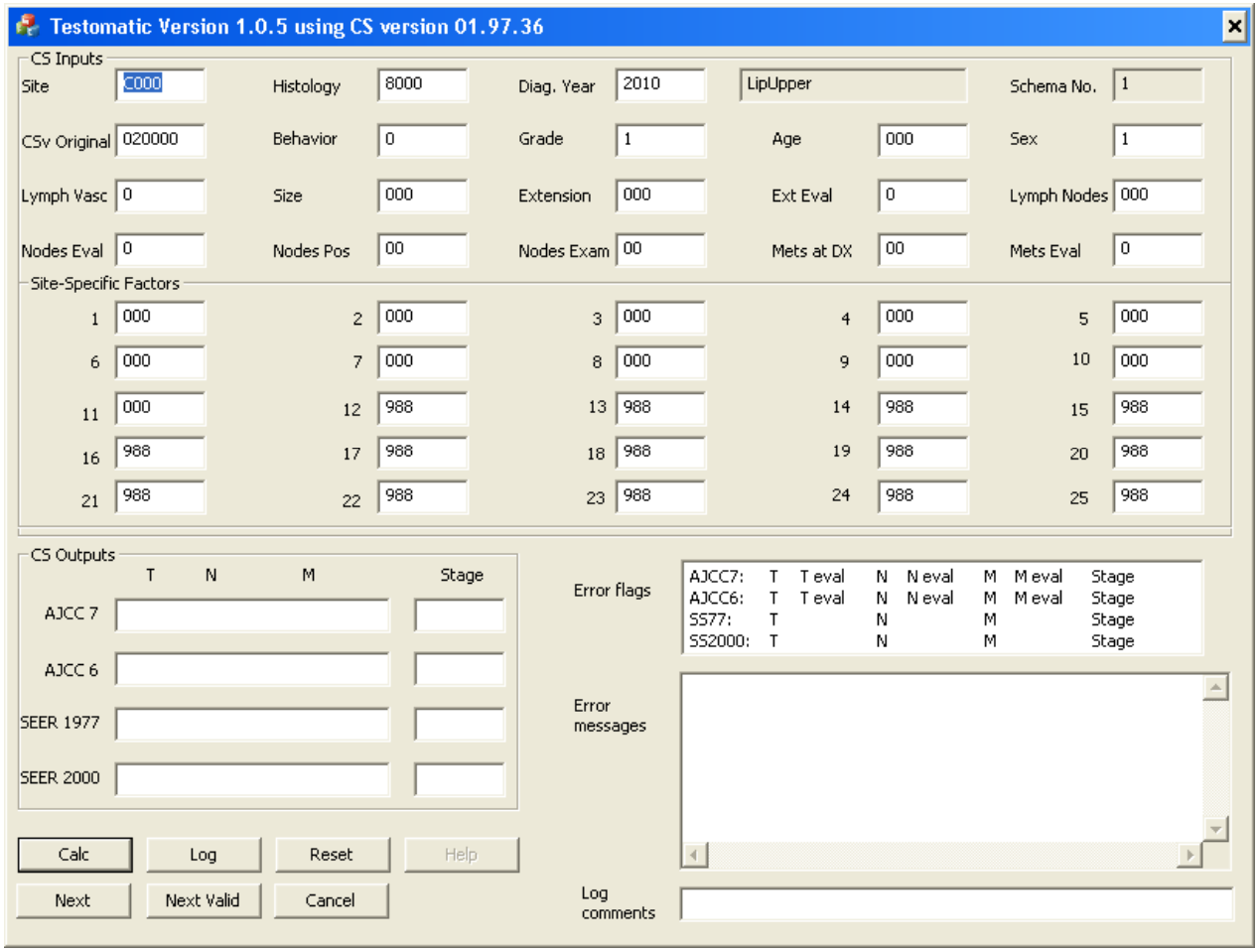
- Role: overall purpose of table
  - Input
  - Histology inclusion
  - Histology exclusion
  - Stage
  - Extra

Test-o-Matic 2.0

New inputs, outputs added

- Tooltips for codes
- Error flags displayed in grid format
- Help button disabled until help documentation complete

Test-o-Matic UI



Thank you

For Questions and Comments on CSv2 Software:

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E-mail: JRogers@cdc.gov

The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention

CSv2 IT Support

Technical Support To Vendors

- Technical Support Provided through E-mail
- CDC Development Team Lead will triage all requests
  - API vs. Mapping/XML
- E-mail to:
  - JRogers@cdc.gov
- Check the web site for update notifications

Testing

Testing Team

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Levels of Testing
- Files Provided for Vendor Use

Levels of Testing

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- XML Consistency Tests
- DLL Tests

XML Consistency Tests

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Mapping Components Verification
- Lookup Table Verification

DLL Tests

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Field Level Tests
- Staging Results Tests
- “Real” Case Data Tests

DLL Field Level Tests

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Fuzzing Test
- Schema Identification Test
- Field Value Verification Test

DLL Staging Results Tests

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Verification of Site and Histology Combinations that Do & Don't Stage
- Mapping Components Verification
- Staging Basis Verification
- Staging Results Verification

“Real” Case Data Tests

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Web-Based Data Collection System
- “Converted” SEER 2004-2007 Cases

Files Provided for Vendor Use

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Spreadsheets
  - Valid Values
  - Invalid Values
  - Obsolete Values (4 types)
- Test Data – in NAACCR V12 Format
  - Valid Records (no errors triggered by DLL)
    - valid.NAACCRv12.in.v020001.txt
    - valid. NAACCRv12.out.v020001.txt
  - Invalid Records (one error triggered per record)
    - invalid. NAACCRv12.in.v020001.txt
    - invalid. NAACCRv12.out.v020001.txt

“Valid” Spreadsheet Snapshot

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

C1 | fx | Extension

	A	B	C	
1	**Schema Name**	**Tumor Size**	**Extension**	**Siz**
2	AdnexaUterineOther	000-995,999	000,100,300,400,500,700,800,950,999	9
3	AdrenalGland	000-996,999	000,050,100,200,250,300,400,600,750,800,810,950,999	0-
4	AmpullaVater	000-995,999	000,100,300,420,520,620,650,700,750,780,800,950,999	0-
5	Anus	000-996,999	000,100,110,120,160,200,300,310,320,330,400,600,700,750,800,850,950,999	0-
6	Appendix	000-995,999	000,050,100,110,120,130,140,150,160,170,200,300,400,410,420,450,460,500,510-513,550,5(	0-
7	BileDuctsDistal	000-995,999	000,100,200,300,350,400,450,600,605,610,620,630,650-651,660,670,700,750,760,780,800,8!	0-
8	BileDuctsIntraHepat	000-995,999	000,100,200,300,400,500,510,520,530,540,545,550,560,570,580,590,630-632,640,650,655,6(	0-
9	BileDuctsPerihilar	000-995,999	000,100,200,300,350,400,450,500,510,550,555,560,600,605,610,615,650-651,660-661,665,6	0-
10	BiliaryOther	000-995,999	000,100,200,300,400,500,550,600,610,620,630,650,660,700,710,750,800,950,999	0-
11	Bladder	000-995,999	010,030,060,100,150,155,160,170,200,210,220,230,240,300,400,410,415,420,430,450,600,6!	0-
12	Bone	000-997,999	100,200,300,310,350,400,600,700,800,820,950,999	0-
13	Brain	000-995,999	050,100,110,120,150,200,300,400,500,510,600,700,750,800,950,999	9
14	Breast	000-999	000,050,070,100,170,180,190,200,300,380,390,400,510,512,514,516,518-520,575,580,585,5!	0-
15	BuccalMucosa	000-996,999	000,100,200,300,405,410,415,500,510,525,550,600,605,620,650,660,665,670,700,725,730,7	0-
16	CarcinoidAppendix	000-995,998-999	000,050,100,110,120,130,140,150,160,200,300,310,320,330,340,350,400,420,450,460,500,5!	0-
17	Cervix	000-995,999	000,010,110,120,140,200,210,220,250,300,310,350,360,370,380,390,400,410,420,440,450,5(	0-
18	CNSOther	000-995,999	050,100,300,400,500,600,700,800,950,999	9
19	Colon	000-995,998-999	000,050,100,110,120,130,140,150,160,170,200,300,400,410,420,450,460,500,550,560,570,6(	0-
20	Conjunctiva	000-995,999	000,100,110,120,140,150,300,350,400,500,510,530,550,700,710,720,730,780,790,800,810,9!	0-

Conversion Specifications

CS Vendor Webinar
CSv1 – CSv2 Conversion Specifications

Jennifer Seiffert

Northrop Grumman Contractor, NCCDPHP

National Program of Cancer Registries

Centers for Disease Control and Prevention

General

- Specs do not rely on date of diagnosis
- Specs will provide instructions for filling new fields with a value or with blanks
- Specs will identify cases needing manual review
  - Numbers are very small
  - Most facilities will have no cases to review

Conversion Documentation (1)

Specs are being provided in three parts:

- **Part 1:** Word document with general instructions and specs for global rules-based conversions
  - Example: CS Extension
    - Lengthened from 2 to 3 characters
    - Convert 88 to 888
    - Convert 99 to 999
    - Add trailing zero to all other values

Conversion Documentation (2)

- **Part 2:** Excel spreadsheet with specs for all schema- and code-specific conversions, with English descriptions for review by SMEs
  - Example: Oropharynx SSF1 Size of Lymph Nodes

    Codes 981-988 (981-988 millimeters)
    convert to
    980 (980 millimeters or larger)

- Site/Type for schema may be referenced

Conversion Documentation (3)

- **Part 2:** Some code-specific conversions are rules based. Rules will be included on spreadsheet.
  - Example: BuccalMucosa, CS Extension, code 650:
    - Rule: If histologic type not (8720-8790), convert to CS Extension code 550, else copy without converting [i.e., conversion is not needed for melanomas which are now staged with new schema MelanomaBuccalMucosa]

Conversion Documentation (4)

- **Part 3:** Minimal version of Part 2's Excel spreadsheet including only columns needed for automated conversion
  - Example:

Schema	Item	Item Num	Code	Conv. To Item	Conv. To Item Num	Conv To Code
Oropharynx	SSF1	2880	981-988	SSF1	2880	980

Release Schedule

- Draft document will be finished by 1/22
- Review by three SMEs and programmers until end of January
- Public release in early February

Conversion Program

- CDC will provide a program converting NAACCR 11 to NAACCR 12 records, with the CS conversion embedded in it
  - Released as DLL and a program that uses DLL to convert from a NAACCR 11 file to a NAACCR 12 file
  - Target for release is 4 weeks after final CS conversions specs are issued

Thank you

Jennifer E. Seiffert, MLIS, CTR

Northrop Grumman Contractor, NCCDPHP

National Program of Cancer Registries

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The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention

EDITS

NAACCR Version 12 Edits Metafile

- Beta Version
  - Scheduled for release week of January 25th
  - Will include:
    - Schema-specific CS field validation edits
      - Using function calls to CS DLL
    - Edits on obsolete CS codes
    - Edits on other new non-CS fields
    - New interoperability date functions and rules

Edits Metafile, continued

- Beta Version
  - Edit Sets for CS
    - Separate edit sets based on standard setter requirements
      - COC
      - NPCR
      - SEER
    - Separate “test” edit set(s) of inter-field edits
      - Work in progress
      - Feedback appreciated!

Edits Metafile, continued

- Second Release
  - Scheduled for release within one month of final release of CS system
  - Will include additional edits and finalized edit sets

Edits Metafile, continued

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Software Considerations
  - NPCR-EDITS tools have been modified to allow function calls to CS DLL
  - NAACCR version 12 metafile must be used with new NPCR-EDITS tools
    - EditWriter, Edits Engine, and GenEDITS Plus

Edits Metafile, continued

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Identification and construction of CSv2 edits will continue to be an ongoing project well beyond the initial implementation of CSv2!

Implementation Guideline

CSv2 Implementation Guide For Registries and Vendors

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Audience
  - Cancer Registrars
  - Central Registries
  - Vendors
- Supplement to all other documents released for CSv2

CSv2 Implementation Guide For Registries and Vendors

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Major changes
  - Staging systems supported by CSv2
  - AJCC 7 chapters/CSv2 Schemas
  - Schema revisions
  - Table and code changes
  - AJCC 7 Clarifications/Changes for T, N, M
    - Example: TIS is an impossible stage category for certain glandular tumors
    - Example: “MX” has been eliminated…

Major Changes Continued

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Explanation of storage and display codes
- CS Versioning
  - Example: CS Version Input Current Value of 020000 on cases successfully converted
- Histology Inclusion Tables

CSv2 Implementation Guidelines

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Schema/Table Structure
  - Schema index page
  - Table structure
  - Non-CS data fields
  - Derived Output from CS Algorithm
  - Data items scheduled for implementation in 2011

CSv2 Implementation Guidelines

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Table Descriptions
  - Table attributes
  - Schema discriminators
  - Tables used in stage derivation
  - Obsolete tables and codes
    - *Identifies cases for manual review*
  - "Not Applicable" codes

CSv2 Implementation Guidelines

- Coding/updating requirements
  - Standard Setters Requirements
    - Commission on Cancer
    - NCI/SEER Program
    - CDC/NPCR
  - Coding non-collected data fields
  - Updating existing data
  - Special considerations for updating cases coded in CSv1

CSv2 Implementation Guidelines

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Software Implementation
  - Source files
  - Application Interface (API)
  - Data Card changes
  - Schema Determination
  - Derivation of stage values
  - Version stamping

CSv2 Implementation Guidelines

- Data conversion from CSv1 to Cv2
  - Specific conversion specifications are a separate document
- Documentation
  - User Documentation Part 1 and Part 2
- Edits
  - NAACCR Version 12 Edits Metafile

CSv2 Implementation Guidelines

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Considerations for
  - Central registry considerations
  - Vendor/software developer
  - Facility Registry
- Training

CSv2 Implementation Guidelines

COLLABORATIVE STAGE DATA COLLECTION SYSTEM

- Recommend that 2010 cases not be abstracted until NAACCR 12 & CSv2 installed
- If cases abstracted before installation, all CSv2 fields must be reviewed and recoded according to NAACCR12 & CSv2 codes.

Questions & Answers